Remedial Design Investigation to begin at former Memphis Depot

(September 2005) The Memphis Depot will begin an environmental investigation this month as part of the Remedial Design phase of the cleanup program to address environmental impacts at Dunn Field and in the Depot community. Fieldwork and monitoring is scheduled to take place between late September 2005 and mid December 2005.

The investigation will provide additional data needed to clearly define the boundaries and extent of impacted soils and groundwater in the Source Areas on Dunn Field and impacted groundwater in the Depot community, as outlined in the Dunn Field Record of Decision (ROD). The information, along with data collected during previous investigations, will be used to design and monitor the cleanup remedy, which involves four components: 1) using Soil Vapor Extraction (SVE) to treat soils on Dunn Field; 2) injecting Zero-Valent Iron (ZVI) into the groundwater where high concentrations of compounds are present on Dunn Field; 3) placing ZVI in the ground as a Permeable Reactive Barrier (PRB) to treat the off-site groundwater plume; and 4) treating lower-concentration areas using monitored natural attenuation (MNA).

The Depot's environmental contractors will take samples at up to 260 sampling points in a 40-by-40-foot grid pattern overlaying the Dunn Field Source Areas. Using state-of-the-art technology called a Membrane Interface Probe (MIP), the environmental team will take a sample at each point. The MIP uses a sensor to analyze concentrations of chlorinated volatile organic compounds (CVOCs) in the top layer of silty clay soils that extends from the ground surface to a depth of 30 feet. The MIP data will be confirmed by direct sampling of soil at some of the same sampling points, and all of the results will be used to design an SVE program that will effectively treat soil conditions in the Source Area.

In addition to the MIP study, eight to 10 groundwater monitoring wells will be installed on Dunn Field. The data gathered from these wells will better define the boundaries for the ZVI treatment areas and provide locations for long-term monitoring to ensure the remedy works effectively and meets cleanup objectives. Another five wells and six soil borings will be installed in the Depot community to provide additional information about the groundwater aquifer west of Dunn Field in order to effectively design, position, construct and monitor the PRB.

Work will take place at the following locations in the community:

- One well and six soil borings will be installed on vacant property on the west side of Rozelle Street;
- Two wells will be installed along the railway tracks west of Dunn Field;
- One well will be installed on vacant property on the north side of Person Street west of Ragan Street; and
- One well will be installed on MLGW property on the north side of Person Street east of Ragan Street.

The drilling equipment will consist of a large drill rig and a support truck, operated by ProSonic Corporation. The Depot anticipates drilling no more than two days at each well location. The team will make every effort to minimize noise and disturbance to the community.

The U.S. Environmental Protection Agency (EPA) and the Tennessee Department of Environment and Conservation (TDEC) have reviewed and approved the work plan for the project, which includes a Site Health and Safety Plan to ensure the procedures are protective of human health and environment. All work will be conducted in accordance with the standards established by the Office of Safety and Health Administration (OSHA). The safety plan includes air monitoring, dust control measures, personal protective equipment for workers, and cleaning protocols for equipment. Safety fencing at Dunn Field and flagging off Depot will restrict public access to the investigation sites.

The Remedial Design Investigation Work Plan is available for public reference in the Depot's Information Repositories located at the Memphis Depot Business Park and the Cherokee Branch Library. For more information, call the Community Relations Office at (901) 774-3683.